

AGRICULTURE AND FISHERIES DIVISION

Promotes industry and export development by working with industry to improve the sustainability and profitability of the agriculture and fisheries sectors.

Manages the sustainability of the State's fisheries resources and conserves aquatic biodiversity.



Agriculture and Fisheries Division

Nature and scope of activities

The Agriculture and Fisheries Division has diverse responsibilities across primary industries which have a total gross production value of approximately \$8.3 billion per year.

Among our key responsibilities are delivering extension and training services, building industry capacity and devising production solutions for the agriculture and aquaculture industries. The Division also manages the sustainable commercial and recreational use of NSW fisheries' resources, the protection of the aquatic environment and animal welfare.

The Division comprises six branches:

- **Extensive Industries Development** – develops and delivers extension and industry development programs to broadacre, pastoral and private forestry industry managers across NSW to facilitate changes that advance the sustainable development of a profitable farming sector.
- **Intensive Industries Development** – develops and delivers extension and industry development programs to the intensive livestock, horticulture, viticulture, cotton and rice industries. The Branch, together with Extensive Industries Development Branch, collaborates with other NSW DPI divisions on strategic development of agricultural industries.
- **Wild Harvest Fisheries** – is responsible for sustainable management and development of commercial harvest fisheries, and recreational fishing.
- **Fisheries Conservation and Aquaculture** – manages marine protected areas, conservation of aquatic biodiversity and sustainable development of the aquaculture industry. The Branch also has a regulatory role to ensure impacts on the aquatic environment are minimised and that the productivity of fisheries resources is retained.
- **Regional Relations and Education** – fosters strong relationships with regional organisations, delivers accredited training to school leavers, farmers and agribusiness through Tocal College and plays a key role in the delivery of PROfarm training activities.
- **Animal Welfare** – promotes the welfare of animals, striving to meet community and market expectations without compromising the economic feasibility of the industry involved.

Major outcomes achieved

Increasing industry competitiveness

PROfarm

The Hon. Ian Macdonald, Minister for Primary Industries, launched PROfarm in November 2005. PROfarm is the Department's trade mark training program to meet the needs of farmers, primary industries, agribusiness and the community. PROfarm is the cornerstone of future NSW DPI training delivery. PROfarm embraces a professional approach to the design, delivery and promotion of programs that target priority needs. Many courses are subsidised to reflect the public benefits gained through the adoption of more sustainable farming practices.

Training is delivered locally by skilled and respected NSW DPI staff. More than 4100 participants completed a total of 470 PROfarm courses this year from a selection of over 130 courses. Clients access information about courses from a comprehensive brochure, the website www.profarm.com.au, a centralised booking system and through local NSW DPI offices.

Education for beef producers

BEEF-N-OMICS is a new three-day PROfarm course to improve beef herd productivity. The NSW DPI course uses the BEEF-N-OMICS computer program to analyse each beef herd, integrating herd management, feed balances and economic variables. The program generates comparative gross margins for each herd and allows comparisons of gross margins following simulation of management or breeding changes.

More than 260 producers attended field days at which NSW DPI released the results of an industry development project to select commercial breeding cattle for high and low muscling over three generations. Selection created one full muscle score difference between two herds. Analysis of saleyard reports shows that one muscle score difference across all categories attracts a premium of between 10 and 20 cents per kilogram or over \$100 per head.

The project also identified deletion of the myostatin gene as an additional tool to fast track breeding cattle with more muscle. Substantial gain in meat yield is achievable with this new gene technology.

Sheep management

Sheep industry staff have been working on the Australian Wool Innovation's Lifetime Wool project since 2004. The key message to NSW wool producers is to optimise breeding

ewes' nutrition. Under the slogan 'Measure to Manage' producers are urged to monitor and manage ewe fat score and herbage mass in the interests of better wool, higher conception rates and bigger lambs. A NSW DPI developed toolkit assists producers to monitor their breeding ewes and benchmark their performance against target fat scores.

Goat meat industry improvement

The Australian goat meat industry faces the dual issues of inconsistent product quality and irregular supply because most meat is sourced from the feral goat population. To address both issues, staff are currently working on improvements to goat breeding and selection and development of best management practices to increase Boer buck performance in pastoral areas.

Oyster exports

The first batch of Sydney rock oysters was exported in April 2005. Exports continued throughout the 2005-06 financial year with NSW DPI providing advice to the exporter. While the total value was modest, oyster exports are now viable and future shipments will build on an established base.

Primary industries export

During the year, management of Primex moved to the Division of Mineral Resources. However before this occurred Primex organised seminars for 61 international visiting groups from China, Mexico and Brazil and assisted beef breeders to market cattle and semen in China.

Sesame for the Japanese market

NSW DPI has been evaluating sesame seed varieties for cultivation in northwest NSW as part of a project targeting the Japanese niche market for sesame seed bars. Selected varieties must have a naturally sweet taste. In 2005-06 Japanese buyers taste-tested three of an initial 25 varieties to establish their market suitability.

Agronomic studies into time of sowing and harvesting techniques are continuing. Seed increase on the best varieties will continue based on feedback from the Japanese tasting panel in September 2006.

Sustainable industries

Water use efficiency in cotton and vegetable industries

As part of the drive for better natural resource management, NSW DPI, the Australian Cotton Growers Research Association and Catchment Management Authorities identified new techniques to improve water use efficiency in the cotton industry. The aim is to achieve an average whole farm water use efficiency of 75 per cent, a considerable increase on the 57 per cent water use efficiency shown in surveys in the late 1990s. The industry is also promoting irrigation optimisation in its land and water training

programs – an approach that will reduce deep drainage and river salinity while improving cotton growers' competitiveness.

NSW DPI vegetable horticulturists completed a study of the Australian vegetable industry and identified where further water usage efficiency gains could be made. The report, which will be a key reference on water utilisation, points the way for further improvements such as converting from flood to low pressure irrigation systems.



NSW DPI staff member Dr Bruno Holzzapfel measuring plant water status in grape vines.

Pasture and soil management

NSW DPI's PROGRAZE course teaches producers how to assess pastures and livestock and match pastures to livestock requirements. As a result of improved course promotion and partnerships with Catchment Management Authorities, more producers learned how to balance pasture maintenance and livestock production in 2005-06. In total 477 producers completed PROGRAZE courses, an increase of 83 per cent over the previous year.

This year saw two major initiatives – the Healthy Soils, Healthy Landscapes project and the Benchmarking and Understanding Soil Chemistry project. The projects were delivered across the Murrumbidgee and Murray River catchments, the Upper and Mid Lachlan catchment and the ACT. Their focus is on improving soil health by benchmarking soil chemistry on a paddock-by-paddock basis. Land managers also learn practical solutions to problems as well as gaining new skills and knowledge for better soil management.

Project achievements during 2005-06 were substantial:

- more than 700 landholders undertook training and 2800 paddocks were soil tested
- new detailed soil characteristic maps for the

Murrumbidgee, Lachlan and Murray Catchment Management Authorities were published

- participants indicated that the workshops helped them to improve their soil management knowledge and skills.

Aquaculture management

Two sustainable aquaculture strategies reached important stages in 2005-06. The Hunter and Central Coast Sustainable Aquaculture Strategy was gazetted. It details best aquaculture practice guidelines, simplifies approvals and maps appropriate aquaculture locations. After extensive industry and public consultation, the draft Oyster Industry Sustainable Aquaculture Strategy was finalised. The strategy aims to recognise and protect oyster-growing areas, detail industry best practice and protect water quality.

The oyster industry program also finalised the rehabilitation of 433 hectares of derelict oyster leases in Port Stephens. An additional 85 hectares of oyster leases were re-let to industry for remediation and then production.

Aquatic rehabilitation

Externally funded projects to improve fish and aquatic invertebrate habitat continued to achieve results, opening up more than 400 kilometres of fish passage and leading to better management of wetlands, floodplains and riparian areas through fencing, weed control and replanting. Audits of over 6500 barriers to fish passage in all coastal catchments were completed, which along with detailed reviews of 130 weirs across NSW, will inform future rehabilitation plans.

Marine parks and aquatic reserves

NSW DPI is responsible for managing aquatic reserves and, as a partner in the Marine Parks Authority, for managing marine parks. At the end of 2005-06, there are six marine parks in NSW incorporating around one third of State waters plus 12 aquatic reserves.

Most activity over the year centred on marine parks. Two new parks were created:

- the 98 000 hectare Port Stephens-Great Lakes Marine Park which covers all of Port Stephens and the associated river and estuarine systems, the Myall Lakes, Smiths Lake and Broughton Island
- the 85 000 hectare Batemans Marine Park which covers the marine and estuarine waters from Bawley Point to Wallaga Lake, including Montague Island.

The draft zoning plan for Port Stephens-Great Lakes Marine Park went on public display in June 2006 while the draft zoning plan for Batemans Marine Park was released in July 2006. The final zoning plan for Cape Byron Marine Park was implemented in 2005-06.

Zoning plans are a key management tool for marine parks and balance conservation needs with recreational and commercial uses through establishing zones where different types of activity are allowed.

To compensate for reduction in areas accessible by commercial fishers in the two new marine parks and also Cape Byron Marine Park, the NSW Government allocated \$22.5 million for voluntary licence buy-outs.

Threatened species

NSW DPI finalised recovery plans for the threatened fish species Oxleyan pygmy perch (*Nannoperca oxleyana*) and silver perch (*Bidyanus bidyanus*). Amendments to the threatened species provisions of the *Fisheries Management Act 1994* were implemented and will integrate threatened species legislation with broader initiatives in natural resource management and land use planning.

Environmental assessments for commercial fisheries

The Minister for Primary Industries made determinations for the ocean trap and line, ocean trawl, lobster and abalone commercial fisheries. The determinations enable the ongoing validation of commercial fishing entitlements, set out sustainability requirements and enable the preparation of share management plans for each fishery. NSW DPI is now finalising fishery management strategies to give effect to the determinations, an activity that will complete a major program to ensure the long-term sustainability of our commercial fisheries.

Share management plans

Substantial progress was made in preparing the share management plans for the estuary general, estuary prawn trawl, ocean hauling, ocean trawl and ocean trap and line fisheries. On completion these plans will provide commercial fishers with a secure access right, greater flexibility to adjust their businesses and a platform to build a more viable commercial fishing industry.

Access to natural resources

Water resource planning

NSW DPI staff played a key role in the whole-of-government development of macro water sharing plans. Our work involved development of water policy, water access and trading rules, and review of individual water sources. The focus was on achieving a balance between protection of riverine and groundwater-dependent ecosystems and extraction of water for agriculture, industrial and urban uses. Targeted consultation with identified stakeholder groups and some broader public consultation informed drafting of the plans, which is still underway. The water sharing plans should be complete by 2007.

Healthy and safe industries

National identification for cattle, sheep and goats

NSW DPI worked with all sectors of the NSW cattle industry to implement the final and most significant stage of the National Livestock Identification System for cattle – a database recording of cattle movements. Transaction recording of individual cattle commenced at saleyards and abattoirs on 1 July 2005 and property movement recording on 1 January 2006. NSW DPI staff conducted training activities in electronic recording for 553 industry participants, made presentations at agricultural events and answered over 5500 hotline enquiries.

On average the national database recorded 40 000 cattle transactions through 56 saleyards and 25 abattoirs in NSW every week.

The National Livestock Identification System for sheep and goats commenced on 1 January 2006 following policy, educational and promotional work by NSW DPI. We consulted with industry groups and Rural Lands Protection Boards to achieve agreement, interstate consistency and consideration of NSW-specific issues, and assisted in developing nationally consistent compliance procedures.

While some industry sectors had been concerned about NLIS sheep tagging exemptions, the NSW Minister for Primary Industries put forward a successful compromise proposal to the Primary Industries Ministerial Council. The proposal was that the planned national review be split into an assessment of tagging exemptions by mid 2007 and separate review of the efficacy of the whole system by late 2008. The assessment will investigate concerns about tag exemptions while the review will determine whether there is any need to progress beyond the current system.



A producer applying a National Livestock Identification System electronic device used to permanently identify cattle from birth property.

Combating a potential threat to the bee industry

NSW DPI prepared the bee industry for potential incursion of the varroa mite from New Zealand by developing surveillance kits and supporting information for use in intensive surveys. Varroa mite would cause significant losses of native and hive bees, losses that would in turn dramatically reduce honey production and effective pollination of all plant species. The kit includes instructions on performing innovative and non-destructive testing for external parasites. Testing will not only assist in the identification of any outbreak but also heighten industry awareness of the need for vigilance and reporting.

Excellence in service delivery to stakeholders

Drought management

NSW DPI played a major role in developing StockPlan™, a decision support tool and PROfarm training program that allows producers to make informed decisions on drought strategies. StockPlan™ is based on an earlier drought decision support product, which we have developed to a more advanced level in partnership with Australian Wool Innovation. To date, the partnership has trained service providers in using StockPlan™. The tool will be available from August 2006.

Divisional staff also updated the *Managing Drought* guide, which is a comprehensive information and educational resource.

Complementing our resource material is the unique service that NSW DPI's drought support workers provide across the State. They coordinate services and information from government and non-government agencies, and refer drought-affected families to specialist services. This year they offered face-to-face counselling at 137 farm family gatherings attended by about 7000 people. Drought support workers also helped develop the guide, *NSW Farmers Blueprint for Maintaining the Mental Health and Well-Being of the People on NSW Farms*, recently published by the Rural Mental Health Network.

Agriculture education

A restructure this year consolidated NSW DPI's education services under the name of Tocal College. The college has two campuses, one at Yanco – the Murrumbidgee Rural Studies Centre, and the other at Tocal – the C B Alexander campus. It also delivers courses at an increasing number of external sites, with all training complying with national standards. Development of accommodation and teaching facilities at the Murrumbidgee campus is continuing, as is development of the Aboriginal Rural Training Program.

The college has 120 fulltime students and presents a wide range of short courses under NSW DPI's PROfarm. These courses include traineeships as part of the NSW skills funded development priorities.

The traineeship program has been extended and now includes Conservation and Land Management, Irrigation and Cotton. Program graduates from the College's full-time courses are in demand by employers, which is reflected in the number of full-time enrolments.

NSW DPI's SMARTtrain suite of courses for chemical use are now marketed in South Australia, Northern Territory and Western Australia. In NSW they are part of the PROfarm program.

Animal welfare.

Two new regulations came into effect and a draft regulation reached public comment stage following work by NSW DPI. The new Exhibited Animals Protection Regulation 2005 and Animal Research Regulation 2005 will ensure continuing protection of animals used in research, teaching and exhibitions. The Prevention of Cruelty to Animals (General) Regulation will, when passed, combine current regulations in an improved format.

NSW DPI also developed *Guidelines for Housing Guinea Pigs in Scientific Institutions*. The guideline draws on scientific evidence and feedback from international experts and experienced local practitioners. It is one of a series that includes guidelines for mice, rats and dogs. We also developed two standards documents under the *Exhibited Animals Protection Act 1986*:

- *Standards for the Temporary Removal of Animals in New South Wales*
- *Standards for the Exhibition of Animals at Mobile Establishments in New South Wales.*

Recreational fishing

NSW recreational fishers will enjoy improved fishing opportunities as the result of initiatives such as:

- an increase in the number of fish attracting devices or FADS which are deployed in the open ocean and attract pelagic fish such as dolphin-fish as well as tuna and marlin
- a pilot project to investigate the benefits of existing artificial reefs in recreational fishing havens along the NSW coast
- the release of 7.5 million native and salmonid fish, including record numbers of Murray cod, into NSW waterways with the assistance of acclimatisation societies and fishing clubs
- the stocking of 40 000 mulloway fingerlings in north coast estuaries including the Manning and Tweed rivers.

NSW DPI in consultation with the commercial and recreational fishing advisory bodies, has undertaken a detailed review of saltwater and freshwater fishing rules.

This has included recreational bag limits and fishing methods plus size limits for saltwater fish taken by recreational and commercial fishers. Approximately 3300 submissions were received on the public discussions papers. A range of proposals were examined in light of previous fisheries environmental assessments, the Palmer review of illegal fishing, the National Recreational and Indigenous Fishing Survey and public feedback on previous fishing rule reviews. Final recommendations were developed by the Advisory Council on Recreational Fishing and the Seafood Industry Advisory Council.

Significant issues

QX disease in the Hawkesbury

An outbreak of QX disease in 2005 wiped out 90 per cent of the oysters in the Hawkesbury River. At short notice, NSW DPI staff coordinated the clean-up of oyster leases after this outbreak. Staff from across the Department, local producers and contractors were deployed on this major project. QX resistant oysters were also provided to local producers to allow them to get back into production quickly. The first post-disease oysters reached the market before Easter, over six months earlier than originally planned. Oyster growers praised the understanding, commitment and excellent service provided by the NSW DPI QX team.

The Hawkesbury oyster industry is now in a better position than before the QX outbreak as producers have adopted improved production systems and occupational health and safety standards.

QX disease was found in low prevalence in the Woolli River in early 2006. NSW DPI staff managed this incident by tracing back oyster stock and provided assistance to businesses in the estuary.

Closure of Port Jackson due to dioxins

Port Jackson was closed to commercial fishing to protect public health following the identification of elevated levels of dioxins in prawns and bream.

Responding to the issue, the NSW Government established a \$5 million program managed by NSW DPI to buy out affected commercial fishing businesses on a voluntary basis in recognition of the financial impact of the closure. A total of 36 fishing businesses accepted the buyout offer.

The Government also established a \$250 000 public advisory campaign to inform recreational fishers about the dietary intake of fish taken from the port. The campaign involved a mail-out to recreational fishers who hold one and three-year licences, the erection of signage at key locations, the provision of advisory material to charter operators and fishing tackle shops, and the use of Fishcare Volunteers to convey the message directly to fishers.

Ovine Johne's Disease

Led by a NSW industry advisory committee, a transaction-based contribution scheme was successfully introduced in October 2005 to collect industry funds to support the Ovine Johne's Disease (OJD) program and, in particular, the OJD grants assistance program. Of the 444 producers owed money under the program, 197 were paid out in full during the year.

Pollution in oyster harvest areas

Sections of Tilligerry Creek and the Bellinger River were closed or restricted for oyster production during 2005-06 due to water pollution. NSW DPI and local agencies are addressing the issues of water quality, monitoring, and remediation of pollution points while oyster farmers are taking part in national training on improved land management practices.

Future directions

- NSW DPI will finalise share management plans for the estuary general, estuary prawn trawl, ocean hauling, ocean trawl and ocean trap and line fisheries, that will give fishing businesses secure access rights and allow greater industry flexibility.
- Over the next three years, NSW DPI and the Beef Cooperative Research Centre will establish Beef Profit Partnership teams to accelerate the adoption of new technology.
- NSW DPI will implement the Beyond Salinity Solutions project with \$2.2 million in national funding. Implementation will be in conjunction with Catchment Management Authorities, public and private agricultural providers, and local government.
- Due to poor economic conditions in the irrigated horticultural industries in southern NSW, NSW DPI will implement Steps to Recovery, a package to help growers meet the challenges of a changing market and business environment.

Agricultural and Fisheries Divisional performance				
	Units	2003-04	2004-05	2005-06
Outcomes				
Crop area sown using reduced tillage technology	%	50	70	70
Producers trained in PROGRAZE using improved grazing management	%	95	95	94.5
Satisfactory test results from pesticide surveys of NSW produce	%	99.9	99.9	92.2
Aquatic species protected	no.	25	27	29
Aquatic communities protected	no.	38	39	41
Aquaculture production	\$m	51.1	49.9	52.0
Outputs				
Farmers attending PROfarm training activities	no	-	-	4106
Animal welfare licences issued (research and exhibited animals)	no	441	383	378
Lamb traded 'over the hooks'	%	25	25	30
Native fish stocked	million	2.6	2.4	2.3
Habitat restoration sites	no	131	203	280
Land-based fish farms	no	238	219	230
Areas of submerged lands leased	ha	4333	3982	4192
Fishery management strategies completed	no	3	4	4

CASE STUDY

Excellence in service delivery to stakeholders



Tocal graduation a dual first

There was a special group among the graduating students at Tocal College in March 2006: 51 Chinese and Vietnamese farmers from the Sydney region. Their graduation with the Certificate III in Agriculture was special for the college too as it marked the first time such a group had gained qualifications at Tocal.

Many of the farmers had originally come to Australia to escape war or oppression and had subsequently moved into market gardening, mostly through working for compatriots already in the business. From these modest beginnings they developed the skills and confidence to buy or lease their own farms. They also used their entrepreneurial skills to introduce new crops to the Australian market such as buk choy, gai lan, pak choy and many Vietnamese herbs.

Despite having limited English literacy, and often no formal agricultural qualifications, the farmers expanded their skills by attending NSW DPI field days and other activities. They were therefore ready to make a bigger training commitment when

the Department offered a tailor-made Certificate III course in 2005. This was as a skills recognition course conducted with interpreters in a familiar environment.

The Department's approach proved popular. The farmers successfully completed the courses and participated more fully in training as additional courses and translated resources became available. Coursework involved training days at a local farm with bilingual officers and experts on various farming topics such as chemical use, soil and fertiliser management, and food safety.

The hard effort of the group paid off at the graduation ceremony at Tocal College. As noted by graduate Tony Har—a member of the Chinese Growers Association—'all the graduating farmers think it is very good for them to have a certificate and are proud of their work.'

Photo caption: Director-General, Mr Barry Buffier with Tocal graduates from the Sydney Chinese and Vietnamese communities following their graduation ceremony at Tocal in March 2006.

CASE STUDY

Appropriate access to and wise management of natural resources



Productive partnerships with Catchment Management Authorities

NSW DPI realises that partnerships are a key to achieving results. The Department has developed a productive partnership with the State's 13 Catchment Management Authorities (CMAs) effectively delivering \$9.5 million worth of joint projects in 2005-06. The objectives of these projects ranged from increasing water efficiency on farms to training farmers on how to improve pasture management.

Successful partnerships are based not only on the availability of funds, but also on the achievement of mutual objectives. The Department's network of extension staff and technical experts was engaged on several projects by the Murrumbidgee Catchment Management Authority this year – one concerning aquatic rehabilitation and the remainder focused on sustainable agriculture. The NSW DPI role was to assist the authority in organising on-farm demonstrations and conducting skill development

activities focused on sustainable use of natural resources within a productive farming landscape.

According to Mr Lee O'Brien, Chairman of the Murrumbidgee Catchment Management Authority, NSW DPI involvement was critical to bringing about better natural resource management outcomes in the area.

He also noted that the strong working relationship between the Department and the authority 'bodes well for the future health of the Murrumbidgee catchment' where greater sustainability will provide a win for all sections of the local community.

One of the reasons behind the success of CMA/Department partnerships has been the establishment of specific contact points with the authorities through NSW DPI regional directors, resulting in good two-way communication. The formation of the Conservation Action Unit also assisted in the effective planning and delivery of contracted projects.

Photo caption: Conservation Manager Pat Dwyer with Northern Rivers CMA Board and staff explaining the impact on fish passage of the Coral Avenue road crossing near Mullumbimby.

MINERAL RESOURCES DIVISION

Leads the stewardship of the State's mineral resources to facilitate profitable and sustainable development, effective environmental management, and safe and responsible mining.



Mineral Resources Division

Nature and scope of activities

The Mineral Resources Division contributes to the prosperity of NSW through its stewardship of mineral resources, which in 2005-06 were worth over \$10 billion in export earnings. Royalties from the mining industry over the same period totalled \$503 million for the New South Wales Government.

The Division comprises five branches:

- **Coal and Petroleum Resources** – assesses the State’s coal and petroleum resources and advises on resource development, land use and infrastructure planning.
- **Geological Survey of NSW** – undertakes geological mapping and resource assessment, audits private sector mineral exploration performance, promotes exploration investment, and coordinates land use planning.
- **Mine Safety Operations** – ensures that the mining and exploration industry meets community and government expectations on safety, health, mine subsidence and resource extraction.
- **Minerals Development** – administers mining and exploration titles, collects mineral, coal and petroleum royalties, and facilitates new mine developments.
- **Environmental Sustainability** – guides improved environmental performance by industry and works closely with other government agencies to regulate industry activities.

Major outcomes achieved

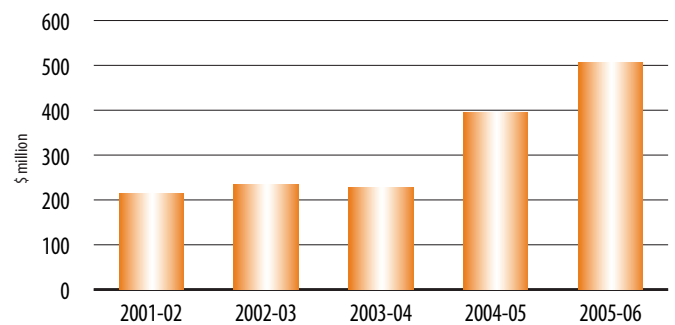
Primary industries competitiveness is increased

Record production and royalties

The total value of NSW mineral production in 2005-06 was estimated at around \$11.6 billion, an increase of 26 per cent on the previous year. Coal, with an estimated value of about \$8.5 billion in 2005-06, remained the strongest performer, accounting for over 73 per cent of the total value of mineral production. Metallic and industrial mineral production was also significant and was worth an estimated \$3.1 billion.

NSW royalty figures for 2005-06 indicate record collections. Net royalty collected was around \$503 million, an increase of \$107 million, or 27 per cent, over the previous year. At \$447 million, coal royalty collection was up by 26 per cent, largely due to increased prices for export coal. Non-coal royalties increased by around 34 per cent to \$56 million.

Mineral royalties over 2001-02 to 2005-06



New development

The rise in coal and mineral prices since 2004 has encouraged the development of a number of coal, mineral and petroleum projects, as shown by new capital expenditure figures which exceeded \$1 billion for the third consecutive year in 2004-05. Preliminary figures suggest such expenditure reached \$1.7 billion in 2005-06.

The Minister for Mineral Resources granted 16 new mining leases during 2005-06 including those for the Pine Dale, Ravensworth West, Tarrawonga (formerly known as East Boggabri), Werris Creek and Wilpinjong coal mines. Construction work on the \$117 million Wilpinjong mine near Mudgee has since commenced. Major extensions to the Hunter Valley Operations, Muswellbrook, Mt Owen and Wambo coal mines have also been approved along with extensions to the Lamberts Gully and Clarence coal mines.

A number of proposed new coal, mineral and petroleum projects and extensions to existing mines are at various stages of the approvals process. If all projects were to go ahead over the next decade, capital expenditure would be in the vicinity of \$5 billion and at least 4000 new jobs would be created.

In April 2006, the Minister granted an exploration licence to BHP Billiton for the Caroon Coal Area. If mining is approved at Caroon, it has the potential to generate 1000 new jobs and up to \$2 billion in capital works and infrastructure projects over the life of the mine.

2005-06 marked the start of production at the Cowal gold mine near West Wyalong, the New Cobar underground mine, and the \$110 million Ginkgo mineral sands project in the Murray Basin.

Titles

NSW DPI improved mining titles services through:

- the review and reformatting of the Titles section of the Department’s website
- the launch of TASMap, an online facility for viewing all titles-related graphic information

- continued maintenance of the TAS titles database, which contains details of over 10 000 current and historic titles and \$511 million in environmental security deposits.

There were 2396 title applications and dealings for exploration and mining during the year.

Title applications and dealings for 2005-06

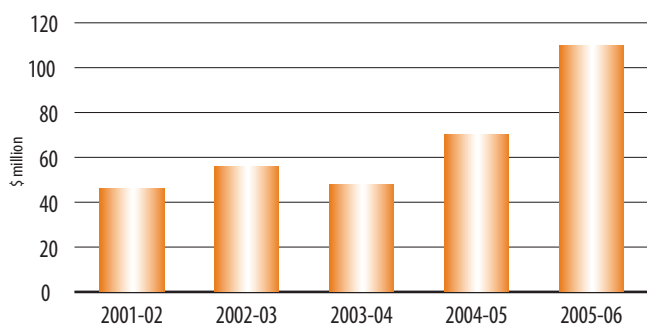
Exploration licence application		Exploration licence renewals		Mining lease applications		Mining lease renewals		Dealings registered	
Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
172	169	192	239	8	16	40	79	1600	1893

Increased exploration activity

Due to record global demand for minerals, mineral exploration activity increased by 55 per cent over last financial year to reach \$114 million in 2005-06.

The rise in the number of mineral exploration licences this year over the previous financial year is another indicator of increased activity, as is the record increase (45 per cent) in spending on petroleum exploration. The latter is largely due to investment in coal seam methane projects in the Gunnedah and Sydney basins.

Private mineral exploration in NSW 2001-02 to 2005-06



Future exploration projects will benefit from completion of the largest airborne magnetic and radiometric survey ever conducted in NSW. The survey, which covered parts of the north-west and south-west of the State, takes NSW coverage of high-resolution geophysics to 80 per cent. A major seismic survey was also completed over the boundary between the Lachlan and Thomson orogens. The two surveys, together with geological mapping completed in key areas such as Tibooburra and Goulburn, will enhance opportunities for minerals and petroleum exploration.

Construction commenced on a core storage complex in Broken Hill, which will initially be capable of storing more than 80 000 metres of regional exploration drill core. The core storage area will form part of an operational centre offering core preparation and viewing facilities as well as

on-line access to the Department's exploration databases.

NSW DPI provided advice and geoscientific information to many councils following reforms that require local government to develop new strategic land use plans before 2008. We also commenced a review and update of mineral resource advice to councils through Section 117 of the *Environmental Planning and Assessment Act 1979*.

NSW DPI promoted mining investment opportunities in the State at key international industry events such as the Prospectors and Developers Association Convention in Toronto, Canada; the Mining Journal's 20:20 Investor Series meeting in London; and meetings with the Japan Oil, Gas and Metals National Corporation in Tokyo.

Healthy and safe industries

Safety operations

The NSW mining industry recorded its first fatality-free year during 2005-06. Over the same period serious bodily injuries/serious injuries decreased 27 per cent while dangerous occurrences/incidents fell six per cent. Details on safety performance appear in this report in the section on the Biosecurity, Compliance and Mine Safety Division along with information on implementation of the Wran Review safety recommendations.

Six major investigations were completed and four successful prosecutions resulted in penalties ranging from \$30 000 to \$60 000. NSW DPI was successful in prosecuting a rope failure at Wyee Colliery, which brought the total number of successful prosecutions since the 1999 introduction of the enforcement policy to 31. We supplied a senior investigator for the inquiry into the Beaconsfield mine accident in Tasmania and, following extensive consultation, developed new regulations for the *Coal Mine Health and Safety Act 2002*. The regulations are currently on public exhibition in advance of implementation in the second half of 2006.

Safety legislation

Mine safety is now funded by industry following the implementation of the Mine Safety Levy. NSW DPI facilitated the implementation of the *Mine Safety (Cost Recovery) Act 2005* allowing for the annual levy by liaising with WorkCover NSW and Coal Mines Insurance to establish levy collection mechanisms. Levy proceeds will be used exclusively to fund the mine safety regulatory functions of NSW DPI.

Field operations

In addition to statutory mine safety assessments, inspections and investigations, we conducted an extensive educational campaign to support the implementation of the new *Explosives Act 2003* and Regulations at smaller mining operations. Further compliance workshops are being planned.

In cooperation with Australian Standards and certification management committees, work is progressing on the introduction of certificates of conformity for plant and equipment used in coal mines. The certificates will replace the current approval system.

Appropriate access to and wise management of natural resources

Environmental performance

The proposed amendments to the environmental provisions of the *Mining Act 1992* were discussed with stakeholders during the year.

NSW DPI held environmental awareness courses for more than 370 licence and mineral claim holders in the new Lightning Ridge Opal Prospecting Area 4 to ensure higher standards of environmental performance and improve rehabilitation outcomes.

We released the *Guidelines for Review of Environmental Factors* (ESB 18) for activities that require a Part 5 Assessment under the *Environmental Planning and Assessment Act 1979*. The guidelines will raise the standard of applications while also streamlining the assessment process.

From 1 July 2006, mining, petroleum and exploration titleholders will provide a rehabilitation cost estimate to NSW DPI as part of the mine operations plan approval process. A modified security deposit calculation process will help ensure that securities adequately reflect the environmental rehabilitation liability on any site. The value of securities held by the Department increased to \$511 million in 2005-06.



Environment Officer sampling water from an artificial wetland used to treat recycled town waste water prior to use in the Bayswater Colliery.

Water management

The NSW Government, through the Ministerial Council on Minerals and Petroleum Resources, joined the Minerals Council of Australia in developing a framework for strategic water management in the minerals industry. The aim of this

joint initiative is to promote responsible water management at mining and processing sites and instill an understanding that water is a vital business and community asset. The framework highlights examples of efficient water use and cooperative partnerships in NSW and other states.

Environmental rehabilitation

Rehabilitation works projects were completed for 26 derelict mine sites across the state using Treasury funding of \$1.7 million and additional assistance of over \$200 000 from the Sydney Catchment Authority and the Department of Environment and Conservation. We conducted environmental assessments at various sites, including surveys for threatened species, heritage assessments, soil and water investigations and preparation of remediation action plans.

Subsidence management plans

Of the 18 mine subsidence management plans received during 2005-06, 16 were assessed and approved. The remaining two are currently being assessed. The process involves consideration of each plan by an interagency committee comprising senior personnel from the Sydney Catchment Authority, the Department of Environment and Conservation, Department of Natural Resources, Department of Planning, the NSW Dams Safety Committee and the Mine Subsidence Board, in addition to personnel from NSW DPI.

Regional operations

All mine operators must prepare, and comply with, a mining operations plan that outlines the proposed mining operations, incorporates environmental management strategies, and details progressive rehabilitation works. Each year operators produce an annual environmental management report describing performance against the plan.

NSW DPI undertakes site inspections, generally around the time of report submission, to ensure that mining operations are progressing satisfactorily. There were approximately 480 such inspections during 2005-06, resulting in the issue of some 50 directions to mining companies to undertake rectification works.

Regional environmental officers gave technical advice to the Hunter and Central Rivers Catchment Management Authority on the Authority's 2005 awards for environmental excellence in the coal industry. The Mt Owen mine secured the award for excellence in biodiversity management and innovative native ecosystem rehabilitation.

Significant issues

Coal

Following the release of the Caroon Coal Area, the Minister established a community consultative committee chaired by the Hon. Gary West to address community concerns on exploration of the area. The committee includes members of the local community, BHP Billiton and NSW DPI.

NSW DPI gained the agreement of the Department of Planning in recognising the importance of coal resources in the Metropolitan Strategy, which defines the new release areas for the Sydney Region over the next 25 years. The south west sub-regional strategy will be developed in consultation with NSW DPI to ensure mining title areas and the coal resources in the region are protected now and into the future. The Campbelltown, Camden and Wollondilly councils' Local Environmental Plans will reflect the strategy.

Opal mining

The Minister's release of Opal Prospecting Area No. 4 (OPA4) at Lightning Ridge in November 2005 included the implementation of more stringent environmental and safety conditions, which were developed in consultation with stakeholders. The opal industry welcomed the release as it is keen to find additional sources of high quality opals for the world market.

Future directions

Exploration

The successful Exploration NSW initiative will continue through to 2008 via a new scheme designed to build on past results. The 'New Frontiers' initiative is worth \$9.5 million and will focus on three themes, New Energy, New Dimensions and New Frontiers. The scheme will assist NSW DPI to boost exploration investment in the State's under-explored regions as well as facilitating the discovery of clean gas energy resources through an improved interpretation of the 3D geological framework of NSW.

Legislation

Amendments to the environmental provisions of the *Mining Act 1992* will strengthen the administration of mining activities in NSW and produce better environmental outcomes without adding significantly to the mining industry's compliance costs. The amendments are currently at the drafting stage and should go before parliament in the latter half of 2006.

Regional assessment of Western Coalfield

A major regional assessment of the Western Coalfield will commence in 2006-07 to identify coal resources suitable for the domestic and export markets.

Minerals Resources Divisional performance				
	Units	2003-04	2004-05	2005-06
Outcomes:				
NSW share of private mineral exploration in Australia	%	8.3	7.2	9.2
Value of NSW mineral production	\$m	6800	9200	11 600
Royalties collected	\$m	233	396	503
Lost time injuries	No.	535	565	411
Fatal injuries	No.	3	1	0
Mines operating to agreed mining operation plans	%	90	95	95
Environmental security deposits held	\$m	310	473	511
Outputs:				
Coverage of state by new standard series geoscience maps and data	km ²	50 000	30 000	27 000
Titles and dealings processed within published time frames	%	90	90	88
Royalty debt level - % of total royalty receipts	%	0.50	0.20	0.15
Value of PRIMEX assisted sales and negotiations	\$m	4.5	5.7	2.0
Safety regulation - Investigations (safety operations)	no	na	494	501
Enforcement actions	no	na	394	360
Environmental regulation audits, assessments and reviews	no	650	798	812
Investigations and enforcements	no	40	45	134
Rehabilitation of derelict mine sites	no	34	50	26

CASE STUDY

Strong economic performance of primary industries



Mining project gets the green light under new planning procedures

Wilpinjong Coal, which is 100 per cent owned by Peabody Energy, received development approval from the Minister for Planning and was granted a mining lease by the Minister in February 2006.

Construction work on the open cut mine has commenced. At full production the mine should produce up to 10 million tonnes per annum of saleable coal. Most of the coal will go to Macquarie Generation under a long-term contract but, over the estimated 21-year life of the mine, approximately 33 million tonnes will be exported. Export revenue is forecast to be approximately \$1.7 billion.

Recent amendments to the *Environmental Planning and Assessment Act 1979* change the way in which major projects such as this are assessed and approved.

Wilpinjong Coal Pty Ltd was the first mining company to proceed through the development and assessment approvals process under the new Part 3A provisions.

As required, the company submitted an environmental assessment report with its application and the report was placed on public exhibition.

The Minister for Planning, during the assessment process, set up an independent expert panel to advise him on the mine's potential impacts on surface and groundwater, flora and fauna and vegetation offsets and rehabilitation. The panel met in Mudgee and considered public submissions.

There will be major economic benefits at a local level. The mine is expected to employ around 200 people during construction and 100 on average during operation.

The mine should generate approximately \$360 million per annum in business turnover for the Mudgee region.

Photo caption: Mine contractors in consultation on safe operational planning.

FORESTS NSW

*Forests NSW operates as a public trading enterprise.
It manages the forests estate to provide timber
now and into the future.*



Forests NSW

Nature and scope of activities

Forests NSW is a public trading enterprise within NSW DPI. Its role is to profitably and sustainably manage more than two million hectares of native and planted forests on behalf of the people of NSW. There are three main areas of activity – planted forest operations, native forest operations, and technical and business support services.

Forests NSW is committed to best practice in health and safety and provides a safe working environment for its people, contractors and visitors to state forests.

In addition to a sharp commercial focus there is a strong and demonstrated commitment to environmental performance. Conservation and advancement of forest values such as biodiversity, sustainability and the capacity of forests to serve as carbon sinks form major focal points of our forest management practices.

Forests NSW has five branches:

- **Native Forest Operations** – manages the native forest estate in five regions across the state supplying native forest timbers to a wide range of customers for a variety of products as well as promoting environmental and biodiversity protection and recreational opportunities.
- **Planted Forest Operations** – manages the softwood and hardwood plantations in four regions across the state supplying plantation timbers to a wide range of customers for a variety of products as well as promoting environmental and biodiversity protection and recreational opportunities.
- **Commercial Services** – undertakes marketing, sales and delivery of native and planted forest products and develops new business opportunities as well as managing relationships with customers, contractors, investors and business partners. It also conducts timber inspections.
- **Land Management and Technical Services** – identifies and implements technology solutions to support native and planted forest operations. Interacts with the community through the provision of information systems, prevention and suppression of fire, nurseries, regulatory compliance, sustainability and land management, and frameworks for the management of recreational activities in State forests.
- **Financial and Operational Business Services** – provides administrative services and operational support to the whole of Forests NSW, including formal accounting, reporting, taxation and internal treasury functions, transactional processing and administrative services, human resources functions, information technology, legal services and records.

Forests NSW is also required to prepare a separate annual report, which covers its specific statutory requirements as a public trading enterprise together with a companion social, economic and environmental report. The latter provides more details on how state forests are sustainably managed.

Major outcomes achieved

Commercial performance - profits for 2005-06

Forests NSW delivered a moderate commercial result from its trading activities during the year with an underlying trading result of \$31.12m.

The softening of the housing and construction industry resulted in market price reductions, which had a flow on effect to the prices Forests NSW receives for its products. As timber market prices underpin the valuation of the timber inventories, the overall value of the estate was reduced at year end, resulting in the adverse effect on reported profits.

The increasing costs of diesel and other fuels and oils, had a major adverse impact on the costs of plantation and roading activities undertaken with both Forests NSW and contracted heavy earthmoving equipment. The trading results of Contract Harvest & Haulage activities, now a major component of Forests NSW overall business, were significantly affected by the increasing costs of fuel. The present price mechanisms for Forests NSW products do not fully recognise the fuel cost impost, thereby resulting in a net negative effect on the overall trading result of the organisation.

The relatively benign fire season experienced over the 2005-06 summer months contributed to the expenditure savings the organisation was able to achieve in almost all expense categories, which partially offset lower than expected revenue from sale of timber and related products.

Carbon trading

In 2004–05 Forests NSW became the first organisation in the world to generate and trade forest carbon sequestration certificates under a registered greenhouse emission-trading scheme, the NSW Greenhouse Gas Abatement Scheme (GGAS). In total, we generated 166 005 NSW Greenhouse Abatement Certificates from around 10 000 hectares of hardwood plantation on the NSW North Coast.

This year, after an independent audit endorsed the carbon sequestration calculation methods, the GGAS Administrator formally amended the Forests NSW conditions of accreditation to also include sequestration from 13 000 hectares of eligible softwood plantation.

The NSW Carbon Accounting System developed by Forests NSW was a finalist in the Climate category of the prestigious Banksia Foundation Environmental Awards. The system was recognised as playing a key role in the emergence

of emissions trading schemes, which deliver economic incentives for reforestation projects and attract large-scale private sector investment into new forests planned for both carbon and timber in NSW.

Business improvement

With the continuing downturn in the housing market, strong financial controls and ongoing improvement in systems development and operational performance were necessary.

Business improvement initiatives included:

- the strengthening of formal approval processes for major operational and all capital expenditure
- extensive consultations for the implementation of a new organisational structure involving the amalgamation of some regions and the establishment of three business service centres to be located at West Pennant Hills, Coffs Harbour and Albury. A memorandum of understanding has been negotiated with the Public Service Association and staff information sessions are currently being conducted
- amalgamation of Forests NSW and NSW DPI offices in Deniliquin, Yanco, Maitland, Dareton and Grafton and exploring further opportunities for co-location.

Systems development

Our ongoing work on operational and administrative systems development to improve performance achieved wider recognition when our market supply modelling system won gold in the 2005 NSW Premier's Public Sector Awards. For more information on the system and its benefits, see the separate case study in this report.

Other systems development work included:

- upgrading the information available to our harvest and haulage contractors and sales customers through the NSW DPI website
- introduction of a new management system in maintenance workshops with links into the central fleet management database
- introduction of an electronic timesheet system for employees linked to the corporate payroll system
- increasing electronic transaction handling to minimise physical handling of source data.

These improvements are aimed at increasing organisational efficiencies needed to maintain commercial viability and underpin longer term sustainable improvements in the organisation's performance.

Health and safety

Forests NSW is a self-insurer for workers' compensation purposes and as such is required to have comprehensive safety systems that meet WorkCover requirements.

During the year, the focus was on consolidating the Safety Management System (SMS) launched in the previous year. An audit by WorkCover of the SMS in two regions identified a number of areas for improvement. To address these issues a Safety Management System Improvement Plan was prepared. Implementation of this plan will further enhance the integration of health and safety into the organisation's overall management systems and normal day-to-day business activities. The plan will also form the basis of a continuous improvement process in health and safety and injury management.

Five newly appointed safety coordinators are supporting the continued development and implementation of the SMS across the State, and recruitment action is underway for two more safety coordinators.

Forest management and timber production

Environmental management system

An Environmental Management System has been introduced to ensure that our forestry operations improve their environmental performance over time. This is a practical program for achieving the environmental goals in areas such as harvesting, road works, plantation establishment, fire management, and pest and weed control.

Following an external audit, the system achieved certification under ISO 14001. This is a major milestone on the way to gaining full certification of our forest products under an internationally recognised scheme.

As part of the system, ecologically sustainable forest management plans have been put in place in each region. Following public consultation, we published plans for the five forest agreement regions covering 1 526 600 hectares. Further plans are in development.



Forests NSW tree improvement researchers are focused on improving the quality of seeds and seedlings for commercial plantations.

Sustainable industry development in western NSW

Forests NSW worked extensively with the timber industry and other agencies to implement the Government's 2005 decision on the Brigalow Belt South and Nandewar Regional Assessment. The decision permanently conserves 352 000 hectares of forest stretching from Dubbo to the Queensland border and will allow cypress regrowth in the Pilliga State Forest.

Subsequent to the decision Forests NSW signed 20-year wood supply agreements with five sawmill companies in the region.

The Community Conservation Council, established under the *Brigalow and Nandewar Community Conservation Area Act 2005*, supported the Forests NSW proposal for cypress thinning, inventory and access to private property timber to improve biodiversity and timber values. \$12 million in funding will be available over five years to create additional jobs in the region.

In addition, the Government's decision provided for a review of firewood operations. Forests NSW is now consulting through the Community Conservation Council and commercial operators on future management of commercial firewood operations.

North coast timber supply strategies

The results and possible implications of a major resource analysis were canvassed with north coast customers who have 20-year wood supply agreements. This analysis is at the core of long term supply strategies being developed to accommodate the 20-year agreements.

Tree improvement program

The plantation improvement group working at the new Grafton Forest Technology Centre successfully tested new cultural treatments that are likely to improve the quality of eucalypt seedlings and, in turn, the survival rates of transplanted seedlings. Improved techniques were also introduced for handling seedlings at the transplanting stage. Immediate gains are expected from nurseries as they implement the new seedling handling practices.

Another focus was the delivery of genetically improved seed to commercial plantations. The first genetically improved seed of *Eucalyptus pilularis* (black butt) was harvested from a recently established clonal seed orchard. This seed should lead to significant increase in tree volume in plantations.

Collection of wild seeds on a commercial basis commenced in the native forests of the North East Region. We have already received orders for \$270 000 worth of seed.

Community relations

In 2005-06 Forests NSW received \$9.55 million from the NSW Government to undertake community service obligations on behalf of the Government in regional NSW. In managing our forest estate, there are many ways we contribute to regional communities in addition to these obligations. Some of these include:

Forest roads

Forests NSW spends approximately \$15 million per year on road construction and maintenance in regional NSW and 2005-06 was no exception with expenditure of \$16.7 million. These roads are a vital part of regional infrastructure and provide a substantial benefit for regional communities.

Fire management

Fire prevention and fire fighting are two of the most critical aspects of forest management. Forests NSW lightning strike display system is an invaluable tool in identifying potential fire sites, with coordinates pinpointing a lightning strike to within 200 metres. It is now used by all bushfire authorities in NSW and the ACT. Maps can be easily generated from the system, enabling fire crews to reach the fire and contain it quickly.

Over 800 trained firefighting staff, 46 fire towers, extensive road and trail networks and fleet of firefighting vehicles and machines support the system. We share these resources with the Rural Fire Service and National Parks and Wildlife Service, and provide a high degree of protection to rural areas across the State.

In 2005-06, only minimal areas of State forest were lost to wildfires.



Hazard reduction burning is a key aspect of Forests NSW fire management. More than 800 Forests NSW staff are trained firefighters.

Feral animal management

The management of feral animals on public lands has been a continuing concern for land managers. Forests NSW is currently taking a number of measures to control feral animals on state forests.

Under the *NSW Game and Feral Animal Control Act 2002*, Forests NSW has facilitated access by suitably qualified and licensed hunters onto 97 state forests declared under the Act to undertake feral animal control. Hunting occurs on these forests under a special licensing system administered by the Game Council NSW. This system replaces the hunting permits previously issued under section 32B of the *Forestry Act 1916*. Other measures to control feral animals include active tracking, baiting and trapping programs on state forests to manage wild dogs and foxes.

Forests NSW is also working closely with other land managers and local landholders to develop effective joint management strategies such as the Brindabella and Wee Jasper valleys cooperative wild dog/fox control plan.

Sponsorship and community events

In November 2005 the Minister launched a new book, *In the Living Forest*. Forests NSW is a major supporter of the book, which fills a significant gap in the literature about modern forestry in Australia and NSW. We donated copies of the book to over 500 NSW high schools and are currently working with the NSW Department of Education and Training on ways teachers can use the book in the classroom.

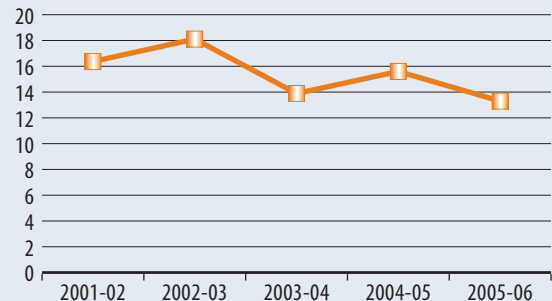
In 2005-06 Forests NSW again sponsored the Kendall National Violin Competition at which young musicians compete for a concert violin made from Australian timbers by renowned Australian luthier Graham Caldersmith. We also continued to sponsor the Polaris Mountain Bike Challenge, which is held in one of our state forests in March each year.



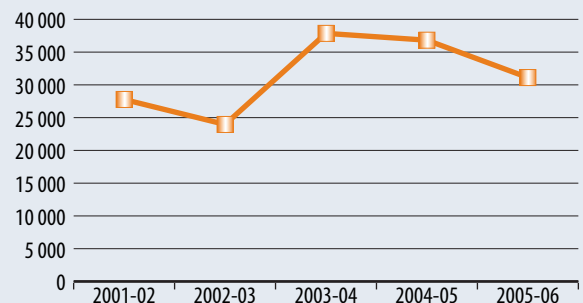
Programs at Cumberland State Forest, Sydney, involve more than 5,500 participants each year. Here, ranger Alex Crosby leads a school holiday group of 'mini-rangers'.

Forests NSW performance

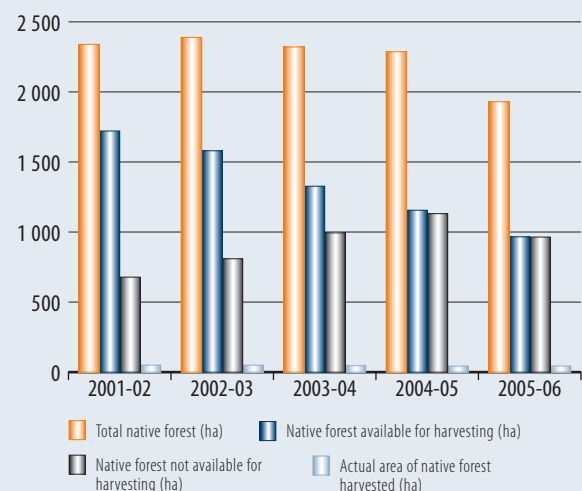
Safety (Frequency rate)



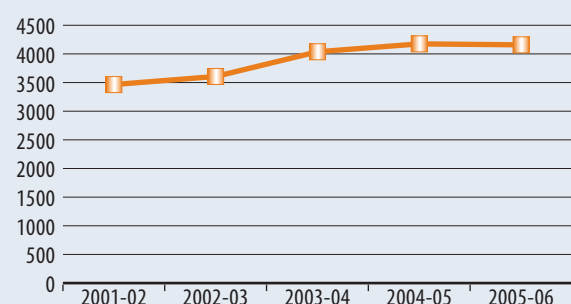
Forests NSW Operating Profit* (\$ '000)



Native Forest Harvested (Area in '000 ha)



Timber to Industry Volumes/Employee (m³)



Significant issues

Softening market conditions

While trading performance was relatively strong through the year, the poor housing and construction markets and the high price of diesel fuels adversely affected results.

In response, Forests NSW implemented a range of initiatives that reduced operating expenditure by 8.3 per cent of the approved annual operating budget, which substantially mitigated the effects of lower revenues.

Norply fire

In September 2005 a fire destroyed the Norply plywood plant at Kyogle. As one of our major customers in the north of the State, the loss was significant, not only for Forests NSW but for other businesses. Forests NSW and other agencies worked with the company and other affected businesses to put in place short-term alternate supply arrangements for log allocations contracted to the company. Consequently, there was no revenue loss for Forests NSW.

North Coast log supply

A combination of factors, including a prolonged spell of wet weather during the summer months, resulted in reduced log supply to customers on the North Coast early in 2006. Forests NSW took steps to develop a more structured approach to log supply including starting additional harvesting contractors in the North East Region and relocating a number of contractors from low volume to higher volume areas. These and other initiatives allowed Forests NSW to meet all customers' log allocations.



Contractor preparing logs from NSW public native forests, for road transport to local mill.

Major price review

Forests NSW initiated the Review of Pricing for NSW Public Native Forest and Hardwood Plantation Log Products. A steering committee consisting of representatives from industry, NSW Treasury, NSW DPI and Forests NSW plus an independent business advisor is overseeing the review.

As part of the review process, Forests NSW prepared and distributed an industry discussion paper and consulted widely with industry stakeholders across the State. The review is expected to conclude before the end of 2006.

Railway sleeper and pallet timbers

Some timber processing mills in the native forest regions on the coast and in the Riverina were significantly affected by reduced demand for pallet and railway sleeper timbers in early 2006. Two decisions were significant. These were the decision of a major purchaser of pallet timbers to cease production of hardwood pallets at its Beresfield (Newcastle) plant and the decision of the Australian Rail Track Corporation to use concrete sleepers for future upgrades of the main north-south rail lines.

Forests NSW is working with affected customers to alleviate the impacts of these decisions.

Future plans

Forests NSW will continue to focus on improving commercial performance, meeting industry requirements and upgrading customer service. Initiatives over the next 12 months, some of which have already commenced, will include:

- a review of heavy fleet management with a view to improving performance
- finalisation of a combined hardwood and softwood plantation strategy. The strategy will provide a clear link between corporate business objectives, stakeholder requirements and operational programs
- achievement of forest certification under the most appropriate international certification scheme by the end of 2006
- further joint work with the timber industry on the North Coast to address long-term issues. Forests NSW objective is to develop five-year plans to meet the needs of each customer
- consideration and implementation of the recommendations of the Major Price Review.

CASE STUDY

Strong economic performance of primary industries



Forest NSW software goes gold

With new public and private plantations in the south west slopes set to boost regional timber processing over the next five years, matching supply to demand and efficiently managing operational issues will be of prime importance. In working out how best to manage the forecast 70 per cent expansion of the timber processing industry, Forests NSW applied its expertise in systems development, and along the way, collected gold in the Business, Management and Financial Performance category of the 2005 Premier's Public Sector Awards.

What Forests NSW came up with is forest-modelling software that employs mathematical optimisation techniques to ensure profitable management of plantation forests. The result of three years developmental work by a multidisciplinary team, the software draws on the large quantities of data that Forests NSW has assembled to model timber growth, harvest and product delivery over the lifecycle of plantations in the region.

The software enables Forests NSW to evaluate various options and choose the best solution. It handles the short-term and long-term with equal ease and is capable of establishing both the forest-to-mill delivery plan for the next eight weeks and the volume of logs that will be harvested in the next 70 years.

The software is also flexible enough to cope with business change. For example, when sawmills change their log specifications it can reflect the new details without significant redevelopment. And Forests NSW can build in revenues from new developments like carbon accounting and the sale of carbon credits.

In a growing industry, the software enables Forests NSW to meet current plantation timber demand and plan for the future. It has already proved a success and has the potential to deliver an estimated ongoing saving of \$4 million per annum when applied to all business regions.

Photo caption: (L to R) Forests NSW former Chief Executive Officer, Peter Duncan, forester Jules Crawshaw, and NSW DPI Director-General, Barry Buffier pictured with the gold award in the 2005 Premier's Public Sector Awards, won for Forests NSW innovative forest modelling software.